UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/057,387	01/25/2002	Guttorm Rudi	P01,0342	1591

7590 06/30/2006

SCHIFF HARDIN & WAITE
Patent Department
6600 Sears Tower
233 South Wacker Drive
Chicago, IL 60606

EXAMINER	
HASAN, SYED Y	

ART UNIT	PAPER NUMBER
2621	

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/057,387	RUDI, GUTTORM	
	Examiner	Art Unit	
	Syed Y. Hasan	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 -11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 January 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *01/25/2002*. (12-26-02)
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

(1) On page 3, line 7, United States Application Serial No should be "09/691,165" instead of "691,165"

(2) In figure 1 reference number 1 is referred to as "tape drive" on page 7 line but is referred to as "tape cartridge" on page 8 line 2 and again as "tape drive" on page 8, line 6. Names should be consistent throughout the document.

Appropriate correction is required.

Claim Objections

2. Claims 3,4,7,9,and 10 are objected to because of the following informalities:

(1) with regards to claims 3 and 4, it is unclear what does limitation "said first tape" and "said second tape" refers to. There is insufficient antecedent basis for this limitation in the claim. Change to "said first pair of tapes' and "second pair of tapes" as referenced in claim 1.

(2) with regards to claims 7, 9 and 10, it is unclear what does limitation "said head positioning assembly" refers to. There is insufficient antecedent basis for this limitation in the claim. Change to "said positioning assembly" or change "a positioning assembly" to " ahead positioning assembly" before "said" in claim 7.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Adams (US 5,911,379).

5. (1) with regards to claim 1:

Adams discloses a holder for wide magnetic recording tape comprising:

four generally rectangular lateral walls (figure 1, column 2, lines 61 - 63)

an opening in at least one of said lateral walls allowing access to a central space inside said lateral walls (figure 1, column 2, lines 63 -65)

a first pair of tape hubs mounted between two ones of said lateral walls for rotation around respective rotational axes (column 3, lines 31 – 34), said first pair of tape hubs having a first magnetic recording tape thereon for winding and unwinding in a transport direction between said first pair of tape hubs and spanning said central space (figure 1, column 3, lines 19 - 23)

a second pair of tape hubs rotatably mounted between said opposite ones of said lateral walls for rotation around respective rotational axes, (column 3, lines 31 – 34) said second pair of tape hubs having a second magnetic recording tape thereon for winding and unwinding in said transport direction between said second pair of tape hubs and

spanning said central space (figure 1, column 3, lines 23 - 28)

the respective rotational axes of said first pair of tape hubs and the respective rotational axes of said second pair of tape hubs all being parallel to each other and perpendicular to said transport direction (figure 1, column 3, lines 43 - 49)

(2) with regards to claim 2:

Adams discloses a holder wherein the tape hubs in said first pair of tape hubs (column 3, lines 31 – 34) are rotatably mounted between said opposite ones of said lateral walls in alternation with the tape hubs in said second pair of tape hubs (column 3, lines 31 – 34), with one tape hub in said first pair of tape hubs being disposed adjacent a first side of said central space and one tape hub of said second pair of tape hubs being disposed adjacent a second side of said central space, opposite said first side of said central space (column 3, lines 30 – 41)

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 3 - 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams in view of Saliba et al (US 6267313).

(1) with regards to claim 3:

Adams discloses all of the subject matter above except for a holder wherein each of said first tape and said second tape has a width, measured perpendicular to

said transport direction and parallel to said rotational axes of said first and second pairs of tape hubs, which is greater than approximately 24 mm

However, Saliba et al teaches that a holder wherein each of said first tape and said second tape has a width, measured perpendicular to said transport direction and parallel to said rotational axes of said first and second pairs of tape hubs, which is greater than approximately 24 mm (column 3, lines 65 – 66)

It is desirable to use wide tape for higher storage capacity. This need for higher storage continues to increase at a fast rate in the future. A significant advantage of the magnetic recording medium is the low cost and large recording area which further increases by using the wide tape.

Therefore it has been obvious to one of ordinary skill in the art at the time the invention was made to include the wide magnetic recording medium as taught by Saliba et al in the invention of Adams in order to achieve the low cost and large recording area by using the wider tape in the recorder of Adams to record data.

(2) with regards to claim 4:

Adams discloses all of the subject matter above except for a holder wherein each of said first tape and said second tape has a width, measured perpendicular to said transport direction and parallel to said rotational axes of said first and second pairs of tape hubs, which is greater than approximately 24 mm and approximately 127 mm.

However, Saliba et al teaches that a holder wherein each of the first tape and the second tape has a width, measured perpendicular to said transport direction and parallel to said rotational axes of said first and second pairs of tape hubs, which is

greater than approximately 24 mm and approximately 127 mm (column 3, lines 65 – 66)

It is desirable to use wide tape for higher storage capacity. This need for higher storage continues to increase at a fast rate in the future. A significant advantage of the magnetic recording medium is the low cost and large recording area which further increases by using the wide tape.

Therefore it has been obvious to one of ordinary skill in the art at the time the invention was made to include the wide magnetic recording medium as taught by Saliba et al in the invention of Adams in order to achieve the low cost and large recording area by using the wider tape in the recorder of Adams to record data

(3) with regards to claim 5:

Adams discloses a holder for magnetic tape comprising::

a first pair of tape hubs having a first magnetic recording tape wound thereon (figure 3, column 3, lines 12 – 17)

a second pair of tape hubs having a second magnetic recording tape wound thereon (figure 3, column 3, lines 12 – 17)

a holder assembly in which said first and second pairs of tape hubs are rotatably mounted, (column 3, lines 32 – 35) said holder assembly having a central space therein with each of said first and second magnetic recording tapes spanning said central space (column 3, lines 32 – 35) further clarifying that the tape hubs are mounted in a holder assembly.

first and second magnetic transport direction and recording tapes each being movable in a transport direction (column 3, lines 43 – 49) further clarifying that they are moving in the same plane and parallel to the inboard side.

Adams discloses all of the subject matter above except for a holder having a width perpendicular to said transport direction of at least approximately 24 mm

However, Saliba et al teaches a holder having a width perpendicular to the transport direction of at least approximately 24 mm (column 3, lines 65 – 66)

It is desirable to use wide tape for higher storage capacity. This need for higher storage continues to increase at a fast rate in the future. A significant advantage of the magnetic recording medium is the low cost and large recording area which further increases by using the wide tape.

Therefore it has been obvious to one of ordinary skill in the art at the time the invention was made to include the wide magnetic recording medium as taught by Saliba in the invention of Adams in order to achieve the low cost and large recording area by using the wider tape in the recorder of Adams to record data

(4) with regards to claim 6:

Adams discloses all of the subject matter above except for a holder wherein each of said first and second magnetic recording tape has a width in a range between approximately 24 mm and approximately 127 mm.

However, Saliba et al teaches that a holder wherein each of said first and second magnetic recording tape has a width in a range between approximately 24 mm and approximately 127 mm (column 3, lines 65 – 66)

It is desirable to use wide tape for higher storage capacity. This need for higher storage continues to increase at a fast rate in the future. A significant advantage of the magnetic recording medium is the low cost and large recording area which further increases by using the wide tape.

Therefore it has been obvious to one of ordinary skill in the art at the time the invention was made to include the wide magnetic recording medium as taught by Saliba et al in the invention of Adams in order to achieve the low cost and large recording area by using the wider tape in the recorder of Adams to record data

8. Claim 7 and 11 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Rudi (US 5963395) in view of Saliba (US 6267313)

(1) regarding claim 7, Rudi discloses a tape drive comprising:

a base plate (figure 4, column 6, lines 13 – 16)

four drive motors mounted to said base plate,(figure 6, page 6, lines 59 – 63) each of said motors having a drive shaft projecting through said base plate (figure 6, column 6, line 66 and column 7 lines 1 – 5) the respective drive shafts of said motors being parallel to each other (figure 6 and 7, column 7, lines 47 – 49)

Rudi discloses all of the subject matter above except for

(1) a magnetic recording head, and

(2) a positioning assembly on which said recording head is mounted, disposed between a central two of said drive shafts, said head positioning assembly selectively positioning said recording head along a direction parallel to said drive shafts

Regarding item (1), Saliba et al teaches a magnetic recording head (figure 4, column 5, lines 3 - 4) wherein it is referred to as "R/W head 51".

It is desirable to use a magnetic recording head for reading and writing on the tape because without the read/write head it would not be possible to read data and record data on the magnetic tape. A significant advantage to a recording medium is the read/write head.

Therefore it has been obvious to one of ordinary skill in the art at the time the invention was made to utilize a magnetic recording head as taught by Saliba et al in the invention of Rudi in order to use a magnetic recording head for reading and writing on the tape.

Reading item (2), Saliba et al teaches a positioning assembly, on which said recording head is mounted,(column 4, lines 63 - 65) pointing to a "head assembly 50", disposed between a central two of said drive shafts (column 5, lines 63 - 64), further clarifying that "drive couplings" here implies drive shafts, and head positioning assembly selectively positioning said recording head along a direction parallel to said drive shafts (column 6, lines 1 - 5) further clarifying that "perpendicular direction relative to the tape transport direction" implies being perpendicular to the drive shaft.

It is desirable to mount the recording head parallel to the drive shaft. This results in a faster time to access data and hence a lower cost per megabyte.

Therefore it has been obvious to one of ordinary skill in the art at the time the invention was made to position the head positioning assembly as taught by Saliba et al in the invention of Rudi to ensure a faster time to access data and hence a lower cost

per megabyte.

(2) regarding claim 11, Rudi discloses a tape drive wherein said drive shafts have respective rotational axes (column 7, lines 11 – 13) and wherein the tape drive further comprises a first set of tape guides mounted to and projecting from said base plate parallel to said drive shafts (figure 6 and 7, column 7, lines 47 – 49) and disposed above said plane, and a second pair of tape guides mounted to and projecting from said base plate parallel to said drive shafts below said plane (figure 6 and 7, column 7, lines 47 – 49)

Rudi discloses all of the subject matter above except for drive shafts defining a plane.

Saliba et al teaches a drive shafts defining a plane (figure 6, column 4, lines 5 – 6) herein referred to as "motor-driven-drive couplings 78,80"

It is desirable for the drive shafts to be in the same plane because without the drive shafts being in the same plane it would have been impossible to achieve the faster access to the files recorded on the recording tape.

Therefore it has been obvious to one of ordinary skill in the art at the time the invention was made to utilize a drive shaft in the same plane as taught by Saliba et al in the invention of Rudi in order to achieve the faster access to the files recorded on the recording tape.

9. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rudi (US 5963395) and Saliba et al (US 6267313) as applied to claim 7 above, and further in view of Okamura (US 3290438)

Rudi in view of Saliba et al discloses all of the subject matter above except for a tape drive wherein the recording head is a dual recording head having first and second read/write elements disposed 180 degrees opposite each other

However, Okamura teaches the tape drive wherein the recording head is a dual recording head having first and second read/write elements disposed 180 degrees opposite each other (figure 1a, column 3, lines 18 –20)

It is desirable to have a dual recording head having first and second read/write elements disposed 180 degrees opposite each other. This results in a faster time to access data and hence a lower cost per megabyte.

Therefore it has been obvious to one of ordinary skill in the art at the time the invention was made to use a dual recording head having first and second read/write elements disposed 180 degrees opposite each other as taught by Okamura in the invention of Rudi to ensure faster access data time and hence lower cost per megabyte.

10. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rudi (US 5963395) and Saliba et al (US 6267313) as applied to claim 7 above, and further in view of Kido (US 4899239).

Rudi in view of Saliba et al discloses all of the subject matter above except for a tape drive wherein said recording head is a single recording head, having one read/write element, wherein said head positioning assembly further comprises a rotatable support on which said read/write element is mounted and being rotatable to selectively position said read/write element at respective positions which are 180 degrees opposite each other.

However, Kido teaches a tape drive wherein said recording head is a single recording head (figure 1, 21, column 4, lines 12 –14) , having one read/write element, (figure 1, 21, column 8, lines 26 – 27) wherein said head positioning assembly further comprises a rotatable support on which said read/write element is mounted and being rotatable to selectively position said read/write element at respective positions which are 180 degrees opposite each other (column 7, lines 45 – 51)

It is desirable to have a read/write recording head that is rotatable and can select positions that are 180 degrees opposite each other. This results in a reducing the no of heads in the assembly and improving the time to access data and hence reducing the cost per megabyte of data.

Therefore it has been obvious to one of ordinary skill in the art at the time the invention was made to use a read/write recording head as taught by Kido in the invention of Rudi for reducing the no of heads in the assembly and improving the time to access data and hence reducing the cost per megabyte of data.

11. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kido (4899239) in view of Saliba et al (US 6267313).

Kido discloses the a tape drive wherein said head positioning assembly comprises:

a slide mounted to said base plate (figure 1, column 4, lines 7-8) further clarifying "a head plate mounted to the upper face of the chassis", a mount, to which said recording head is attached, slidable along said slide,(figure 1, column 4, lines 22 – 23) further clarifying " the magnetic head 21"

Kido does not teach two lateral guides disposed on opposite sides of said mount to guide movement of said mount in said direction parallel to said drive shafts.

Saliba et al, however, teaches two lateral guides disposed on opposite sides of said mount to guide movement of said mount in said direction parallel to said drive shafts (column 5, lines 63 - 64) further clarifying that "drive couplings" here implies drive shafts

It is desirable to have two lateral guides disposed on opposite sides of said mount to guide movement of said mount in said direction parallel to said drive shafts. This ensures that the head mechanism remains stable and is easily guided over the recording tape.

Therefore it has been obvious to one of ordinary skill in the art at the time the invention was made to install lateral guides disposed on opposite sides of said mount to guide movement of the mount in said direction parallel to said drive shafts as taught by Saliba et al in the invention of Kido in order to ensures that the head mechanism remains stable and is easily guided over the recording tape.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Syed Y. Hasan whose telephone number is 571-270-1082. The examiner can normally be reached on 9/8/5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

S.Y.H

06/15/2006

SHUWANG LIU
PRIMARY EXAMINER